

Robert B. Taylor Editor

# Family Medicine

## Principles and Practice

### Third Edition

Associate Editors:

John L. Buckingham E.P. Donatelle

Thomas A. Johnson, Jr. Joseph E. Scherger

With 114 Figures



Springer-Verlag  
New York Berlin Heidelberg  
London Paris Tokyo

# Health Promotion

*John William Richards, Jr. and Alan Blum*

Health promotion sounds simple but is not. The privilege of improving the health of people who feel they already have it is one of the most challenging in family medicine. Indeed, no longer is health just a medical issue. Health is a political, social, and economic issue guaranteed to become increasingly so in the future.

There appear to be paradoxical gaps in the perceptions of patients and the perceptions of physicians about health advice in the office setting. For example, 80% of patients in one survey could not recall that their doctor had ever mentioned the benefits of exercise.<sup>1</sup> In another survey, 72% of adults who stopped smoking reported never having received a doctor's advice to stop.<sup>2</sup> In contrast, a study of primary care physicians found that 80% routinely asked their patients about smoking, drinking, and drug use.<sup>3</sup>

Proceeding from inquiry to advice regarding health promoting activities is the area where physicians indicate problems exist. Only 3% to 8% of the same physicians who reported asking about a patient's smoking status felt they were personally very successful in helping patients to change their behavior.<sup>3</sup> Insufficient training, unavailability of quality patient literature, nonreimbursement, and frustrations due to limited success are cited as reasons why most physicians are not more vigorously involved in health promotion.

Rather than a discussion of the epidemiology and theory of health promotion, the purpose of this chapter is to review practical approaches to promoting good health that can be integrated into a family practice. An active effort to maintain knowledge and skills in this area will result in not only a healthier and more appreciative patient population but also a more professionally satisfying and personally rewarding practice.

## Definitions

Although similar in many aspects and overlapping in numerous others, health promotion is quite distinct from both health education and disease prevention. Health education involves

communicating information, imparting and interpreting technical knowledge, reinforcing positive lifestyles, and exploding myths—part of the objective of which is preventing disease. Health education is the essential first step toward health promotion.

Health promotion combines the objective of disease prevention with the techniques of health education. In other words, health promotion is a combination of simple and complex strategies that encourage physical, mental, social, economic, or general wellness. It requires more than thinking. It requires doing.

Within the medical profession, incentives for becoming involved in health promotion activities have never been strong. There are several reasons for this. Medical training is oriented almost completely toward diagnosis and treatment. Reimbursement for so-called "cognitive" services that involve teaching skills (as opposed to prescribing or surgical skills) has been negligible. Indeed, physicians as often as not relinquish their educational responsibilities to allied health personnel, including patient educators. Underlying medical education is the largely miscommunicated and misperceived notion that physicians should be nonjudgmental and noninterventionists.

During medical school and residency, one may spend months learning to care for patients who have had myocardial infarctions. Yet, even an hour of training in nutritional counseling, childproofing the home, or smoking cessation techniques is rare. As a result, many physicians who accept as mandatory the sleepless nights spent monitoring patients in the coronary care unit might well balk at spending time with a teenager discussing coronary risk factor reduction. One can only conclude that the disease-oriented (rather than patient-oriented) intellectual self-interest of the physician takes precedence over the challenge of ensuring that the patient has understood the message that the physician ought to be communicating.

Reinforcement of pharmacotherapeutic solutions by the daily dose of detail persons and drug company-sponsored

publications further undermines the role of the doctor as teacher and provides disincentives to honing verbal skills. If every medical student, resident, and physician were periodically evaluated on how well their patients could recall and restate what the doctor had advised, we would all devote more attention to health promotion.

For every physician, professional responsibility as a "pro-health" advocate goes well beyond the individuals under his immediate care to include the community at large. Thus, a family physician's approach to health promotion should be a multitiered strategy, involving the office, hospitals, schools, civic organizations, and the mass media. Much of what is presented in this chapter reflects years of trial and error by practicing family physicians and research efforts by members of Doctors Ought to Care (DOC), a physician-led group that advocates health promotion as an essential part of every practice.<sup>4,5</sup>

## The Office

A national governmental survey on the health practices of adults showed that the average family physician's week consists of seeing about 86 patients who believe they have a lifestyle-related problem: considerably overweight (22 females, 7 males), do not exercise enough (two females, 11 males), consume too much alcohol (two females, five males), smoke (13 females, nine males), and are under a great deal of stress (11 females, five males).<sup>6</sup> If this is representative of the typical family physician's practice where 150 patients are seen each week, about half of the encounters might well involve a patient who acknowledges a personal lifestyle problem.

The physician's office is an underused site for health promotion. Incorporating health promotion activities without significantly altering patient flow, placing unreasonable demands on personnel, or increasing costs is less difficult than one might imagine. By identifying anxieties and other emotions attendant to a visit to the doctor's office, a physician can begin to develop positive strategies in promoting health and preventing disease.

The first step is to assume a patient's perspective and to tour the office with the objective of creating a prohealth ambience. The amount of time the patient spends checking in and waiting to see the physician is often several times as long as the physician encounter. This excellent health promotion opportunity is often ignored or even unknowingly used to promote unhealthy lifestyles.

An essential consideration is the image that office staff, including physicians, project to patients. An office staff that is perceived to practice what the doctor preaches cannot help but enhance the effectiveness of health promotion. A receptionist, office manager, bookkeeper, nurse—even custodial staff—can provide reinforcement for the health promotion efforts of the physician. Not smoking in a doctor's office or other health care setting is the least that can be expected of an employee. On the other hand, a physician who smokes and who acknowledges the destructive and addictive nature of the practice as well as his own embarrassment at being a disappointing role model may well have a greater impact on patients than the nonsmoking physician who chooses to ignore

or downplay the subject for fear of alienating a patient or losing a "client."

The impression of your office as a center for health promotion should be apparent readily even as a patient approaches. Indeed, the very setting of the physician's office can relay a message about the concern for the community as a whole. The physician might call attention to a nearby cigarette billboard as a reminder to patients to support stronger measures to counteract such insidious advertisements. Similarly, cigarette, snack food, or soda machines in the lobby of the doctor's building are entirely inappropriate.

A sign allowing for changeable messages by the entrance offers a caring first greeting to patients. (Fig. 11.1). It gives the patient permission to ask questions about personal problems that may not be the actual reason for coming. Moreover, it also gives the physician a chance to comment on emotional subjects without needing to appear judgmental or offend the patient. For example, "Today I'm asking everyone if there are any alcohol problems in their family" seems innocent, yet serves as an excellent opening for the patients who are experiencing problems.

Staff can be directed to reinforce such efforts through small talk and sincere comments. "Mrs. Smith, you're looking very nice today. Have you lost weight?" may do more to facilitate the continuation of a weight loss by the patient than several visits spent reviewing dietary sheets. Unsolicited words of support ("It's not as hard as some people make it out to be; a number of my friends have stopped smoking recently, too.") can also boost intervention efforts. Such comments should be discussed specifically during meetings with the office staff.

## The Reception Area

Not surprisingly, patients may actually spend more time in the reception area than in the physician encounter. One should, therefore, maximize this opportunity for prohealth messages. The reception area, by virtue of its being part of the doctor's office, automatically grants credibility and the physician's implied endorsement to whatever it may contain.

In one survey of physicians, 70% believed that the waiting room was a good place to learn about health (60% believed that patients thought so too). Yet, in that study, 50% admitted spending no money whatsoever on health materials for the waiting area. In fact, the typical waiting area contained pamphlets provided by drug companies and governmental agencies, numerous popular magazines, and occasionally a television set or recorded music.<sup>7</sup>

Although a number of good pamphlets exist, it is unlikely that the patient will even pick up those with embarrassing titles, fearing what others might think. The adolescent, for example, may be reluctant to pick up pamphlets on sexually transmitted diseases or contraception. One promising alternative is the Media Watch Notebook. This consists of three ring binders into which timely articles on health-related topics and a variety of screened pamphlets can be placed.<sup>8</sup> Inserting clippings from local newspapers and magazines has several advantages, not the least of which is that they are written by people who usually write for consumers. Articles brought in by physicians, staff, and patients can be placed in plastic

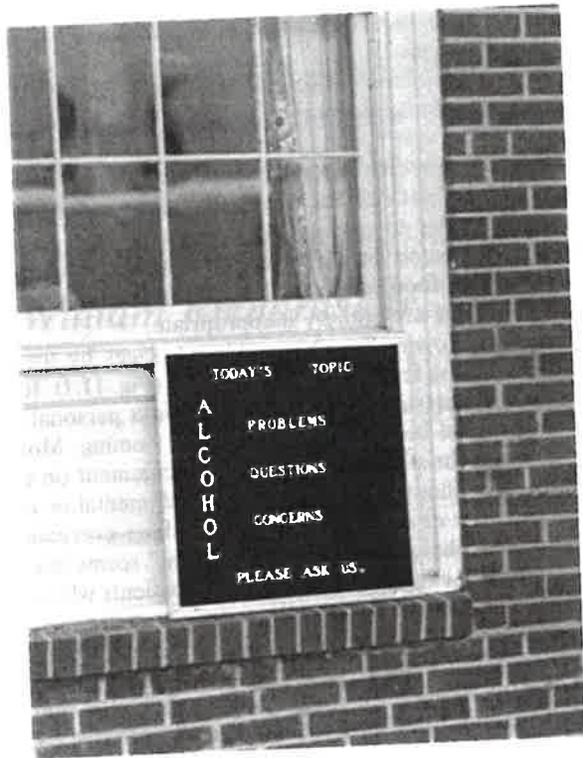


Fig. 11.1. Changeable signs announce today's topic and give permission to broach sensitive subjects to both patient and physician. Reprinted with permission.

sheets and inserted into binders and conveniently placed around the waiting room. Even "media-hyped" articles and advertisements that are inaccurate might have a role in educating patients when they are accompanied by the physician's own comments discussing the misconceptions contained, the health risks promoted, or the quack products advertised. Physicians must review each piece to ensure that information is accurate and in keeping with practice philosophy.

One should be careful not to underestimate the patient's desire for information nor overestimate his ability to understand and incorporate it. When the physician hands a pamphlet to a patient, key passages should be underlined in the presence of the patient for personal reinforcement. Even the weakest brochure has some redeeming value, and the physician can help highlight the main points. This also shows that the physician has done his homework and is not just fobbing off the patient with a brochure and "Here-read-this-let-me-know-if-you-have-any-questions, See-you-next-week."

Physicians are the targets of publishers who are trying to get their magazines displayed in the office, thus serving as an implied endorsement of the magazine and its editorial and commercial content. One of the most disturbing of these is *Better Homes and Gardens*, which offers a very low "professional rate" and portrays itself as a health magazine. Similar attempts to portray themselves as health oriented magazines are *Ms*, *Working Woman*, *National Enquirer*, *Family Circle*, and *Woman's Day*. (Practically alone among women's magazines in refusing cigarette advertising is *Good Housekeeping*.) Not mentioned in the solicitation is that each issue contains upward of ten to 15 cigarette advertisements often juxtaposed

with health articles.<sup>9</sup> An ominous trend is the placement by pharmaceutical manufacturers and their publishing arms of wall posters ostensibly designed to promote health. It is important for physicians not to let their office become vehicles for test-marketing medications and other gimmicks.

Such magazines as *Time*, *Newsweek*, *Sports Illustrated*, *Better Homes and Gardens*, *US News and World Report*, *Ladies Home Journal*, and *People* are the most frequently purchased for use in doctors' offices.<sup>10</sup> However, these magazines are replete with tobacco and alcohol advertisements. It is absurd to have glamorous models in highly desirable settings promote cigarettes in the waiting room. Physicians can send a message to patients and publishers alike by canceling these subscriptions and subscribing to publications that try not to promote unhealthy products.<sup>11</sup> An alternative technique is to call attention to the harmful and untruthful nature of the ads by rubber-stamping, graffitizing, or pasting stickers on them with comments, such as "This ad is a ripoff!"<sup>12</sup> In addition, a notice could be placed in the waiting room alerting patients to the reason that specific reading material is provided.

If a television is in the waiting room, one might personally produce and offer continuous videotapes with health promoting and educational information, rather than allowing commercial television to be the mainstay of programming. Publicizing the schedule might even result in patients returning specifically to watch programs. With patient permission, one might even videotape encounters focusing on your explanations of diseases, their treatment and prevention or advice on lifestyle changes or enhancements. Alternatively, one might

include personally recorded health tips spliced between songs on prerecorded audiotapes. Patients appreciate and are more likely to respond to the personal touch of seeing their physician on television or hearing his words of advice over the waiting room speaker.

Not to be overlooked is the office restroom. In addition to the patients who will enter for personal reasons, a fair number will be asked to provide urine specimens. In either case, a health promoting poster will receive a few moments of undivided attention.

### The Examination Room

For whatever the acute care problem, health promotion can and should be a part of the agenda. Gathering a complete database and placing lifestyle problems on the problem list are a first step.<sup>13</sup> Starting at an early age, even as young as four or five, exchanges such as “Do you smoke? No . . . pretty yucky isn’t it?” can influence a young patient’s (and possibly their parents’) behavior. Active, updated problem lists are essential to remind physicians and staff to comment or inquire about the status of health behavior changes during each visit. This serves to reinforce patient efforts, since physician concern is often cited by patients as an important influence on their behavior.

Identifying a teachable moment can significantly increase chances for a successful intervention by providing a motivating factor on which to build.<sup>14</sup> It is not surprising that an adult with newly diagnosed diabetes, eager to prevent further illness, is more likely to listen to and act on advice to alter his diet and stop drinking alcohol. The physician must not only be able to recognize when teachable moments spontaneously occur, he must create them.

To the alert physician, the presenting complaint can lead into numerous health promotion opportunities. For instance, a child with bronchitis, an ear infection, or even a “cold” creates a teachable moment to talk about parental cigarette smoking, home heating, diet, and so on. Injuries or accidents may lead to discussions of alcohol and seatbelt use in hopes of preventing future problems. Headaches present an opportunity to discuss stress reduction and coping mechanisms. The routine camp or athletic physical provides an opening to discuss problems adolescents are likely to encounter, such as sexual decision making, substance abuse, and peer pressure.

During the examination itself, opportunities abound. Rather than a spot on the wall for a patient to look at during the ophthalmoscopic examination, the physician can substitute an attention-getting poster to provide a prohealth focus for concentration (Fig. 11.2) A casual comment while examining the mouth (“Still smoking, I see”) or while palpating the liver (“Tell me about your alcohol use”) can plant a subconscious seed for change. Similarly, health promotion material taped to the ceiling can be reviewed by the supine patient during the cardiac, abdominal, or pelvic examinations.

Some physicians even have encouraging or educational messages printed on their prescription blanks. One particularly innovative group, the Clark County Medical Society in Washington, prints, “Please have this filled at a drugstore which does not sell tobacco.” In addition to a unique twist to the nonsmoking message for patients, at least one chain drug-



Fig. 11.2. Focusing the patient’s attention on graphic messages can leave a lasting impression as well as humorously open conversations about lifestyles.

store has stopped selling tobacco products as a direct result of this message.<sup>15</sup>

Although the overall strategy sounds as if the physician is browbeating the patient, in fact it is more subtle than it seems. In reality, it is little more than an attempt to control the environment—in a small way counteracting the commercial pressures of the community at large. The single most important point to remember about health promotion—and about education and communication in general—is that simple messages frequently repeated are the most likely to result in adherence.

While there is certainly a place for the transfer of information about the pathophysiology and epidemiology of the patient’s problem, neither education nor scare tactics have been shown to be very effective in altering behaviors.<sup>16</sup>

To increase effectiveness, physicians should examine closely the basic reasons their patients have developed unhealthy lifestyles, being ever mindful of the techniques used to sell products associated with those lifestyles, for example, smoking or chewing tobacco, drinking alcohol, unsafe driving, or poor nutrition. Most people, especially teenagers, choose products that manufacturers via their commercial advertisers promise will make them look mature, macho, sexy, successful, or more acceptable to their peers. Since more often than not, the products actually cause the opposite of the image the ads portray, the very same “Madison Avenue” images that promote buying and using behavior can also be employed successfully by physicians to alter behaviors. For example, “Miller Time” might be demythologized as “Killer Time,” leading to discussions of the subtle ways in which alcohol advertising promotes risk-taking behavior while the product interferes with characteristics that are associated customarily with being macho.

Physicians should be quick to capitalize on the respect patients frequently accord physician opinions. Well-placed praise and a sincere pat on the back for even the smallest gains provide patients cogent reinforcement for continued behavior shaping. Comprehension and compliance, although often related, are not mutually inclusive terms, and the physician must be careful to follow the question “Do you understand?” with “Will you do this?” The patient’s perception of the importance of the message may be directly related to the time

and manner in which it is presented. Every tonal inflection, gesture and facial impression can add to or detract from the message.

**Habit Diary**

Patients' participation as partners in their own health care is vital. Keeping a diary in a simple pocket notepad can provide excellent information about the stimuli and rewards associated with unhealthy behaviors. Over a week's period of time, patients should systematically record the date, time, activity, action, perceived cues, and thoughts surrounding the behavior to be changed or extinguished. Review of the diary during the next visit and referring to it during subsequent visits can lead to discussion and logical elimination of the cues and rewards or substitution of positive cues and rewards. For example, for the entry "Cigarette after supper," the physician might suggest clearing the table and going for a walk immediately after eating.

**The Contingency Contract**

The contingency contract adds structure, motivation and a sense of commitment to the prospective process of behavioral modification. Many physicians, after discussing the behavior to be changed, use a written contract signed by both doctor and patient. As reinforcement, some provide incentives, such as gifts or discounted follow-up visits, to encourage compliance and reward success. One physician in Hershey, Pennsylvania, offers a \$100 discount to his patients who do not smoke during pregnancy. Whether writing suggestions on a prescription form or using specially designed contracts, something tangible for the patient to take home can enhance effectiveness (Fig. 11.3).<sup>17,18</sup> This maneuver also

*Fig. 11.3.A-E.* Using a specific contract helps organize thinking and planning for lifestyle modification. The signing of the contract signifies a commitment on the part of the patient and physician to work as a team. (From Taylor.<sup>17</sup>)

*Fig. 11.3.A.* Smoking cessation worksheet.

Smoking cessation techniques:  
 Behavioral change:  
     Brand Demythology  
     Aversive strategies  
     Nonaversive strategies  
 Preparation:  
     Motivation  
     Commitment  
     Target stopping date  
 Maintenance:  
     Delay, avoidance, substitution, and reward techniques  
     Social support  
     Physician reinforcement  
 Smoking cessation prescription:  
 Why do you want to quit smoking? \_\_\_\_\_  
 \_\_\_\_\_  
 What day will you quit? \_\_\_\_\_  
 What will you do to keep from taking the next cigarette? \_\_\_\_\_  
 \_\_\_\_\_  
 Date \_\_\_\_\_ Next visit to review progress \_\_\_\_\_  
 Signed \_\_\_\_\_ (Patient) \_\_\_\_\_ (Physician)

*Fig. 11.3.B.* Alcohol use worksheet.

Alcohol use assessment using CAGE questions  
 Have you ever felt the need to Cut down on your drinking?  
 Have you ever felt Annoyed by criticism of your drinking?  
 Have you ever felt Guilty about drinking?  
 Do you ever take a morning Eye opener?  
 Alcohol use prescription  
 What is the role—and risks—of alcohol in your life:  
 Motives for change: \_\_\_\_\_  
 \_\_\_\_\_  
 Prior alcohol use and brands: \_\_\_\_\_  
 Strategies to change alcohol use: \_\_\_\_\_  
 Alcohol use plan: \_\_\_\_\_  
 Date: \_\_\_\_\_ Next reassessment: \_\_\_\_\_  
 Signed \_\_\_\_\_ (Patient) \_\_\_\_\_ (Physician)

*Fig. 11.3.C.* Exercise worksheet.

Guide to calculate the initial exercise prescription for a healthy adult following clinical assessment of the individual's fitness to engage in strenuous physical activity.

Step 1. Estimate maximum aerobic capacity:

Age group	Maximum aerobic capacity of sedentary adult (METs)		Maximum pulse rate
	Men	Women	
21-30	12.0	10	195
31-40	11.0	9	191
41-50	10.5	9	187
51-60	9.5	7.5	182
61-70	8.5	6.0	178
71-80	6.0	5.5	174

Step 2. Determine 60% maximum aerobic capacity and 70% maximum pulse rate.

Step 3. Determine appropriate activity for age, lifestyle, health status.

MET range	Activity examples
2-3	Stroll 2-3 mph; shuffleboard; bowling; swim using float board
4-5	Walk 4-5 mph; cycle 8 mph; golf; light calisthenics
6-7	Walk-jog 5 mph; cycle 10 mph; badminton; split wood
8-9	Jog 6 mph; downhill skiing; swimming; tennis
10-11	Jog-run 7 mph; handball; racketball; heavy shoveling
> 11	Run 8-10 mph; vigorous competitive sports

Step 4. The exercise prescription:

Activity \_\_\_\_\_ Frequency \_\_\_\_\_  
 Intensity \_\_\_\_\_ Precautions \_\_\_\_\_  
 Duration \_\_\_\_\_ Follow-up \_\_\_\_\_  
 Signed \_\_\_\_\_ (Patient) \_\_\_\_\_ (Physician)

Fig. 11.3.D. Nutrition and weight control worksheet.

Dietary guidelines for Americans:

1. Eat a variety of foods
2. Maintain reasonable weight
3. Minimize fat, saturated fat, and cholesterol intake
4. Eat adequate fiber
5. Minimize sugar intake
6. Minimize sodium intake
7. Restricted alcohol use, if at all

Calorie calculation

Step I: Calculate IBW

IBW for 60 in of height	Men (lb)	Women (lb)	Patient
Add per in over 60	106	100	_____
Example: Male, 67 in height:	6	5	_____
106 + (7 × 6) = 148 lb		IBW:	_____

Step II: Calculate basal calories required per day

Basal calories = IBW (lb) × 10

Example: 148 × 10 = 1480 kcal kcal: \_\_\_\_\_

Step III: Add for activity

	<u>Sedentary (medical student)</u>	<u>Moderate (sales clerk)</u>	<u>Strenuous (lumber-jack)</u>
% Basal calories	30%	50%	100%

Example: Moderate—1480 + (0.5 × 1480) = 2220 kcal

Total caloric requirement daily (to maintain weight): \_\_\_\_\_

Step IV: Each pound of body weight is equivalent to 3,500 calories. To lose a lb a week requires a decrease of 500 kcal per day.

Number of lb/week to be lost × 500 = \_\_\_\_\_ calories eliminated per day

Step V: Recommendation: Calories to be eaten each day

Breakfast: \_\_\_\_\_ Lunch: \_\_\_\_\_ Dinner: \_\_\_\_\_ Total: \_\_\_\_\_

Signed: \_\_\_\_\_ (Patient) \_\_\_\_\_ (Physician)

Fig. 11.3.E. Stress control worksheet.

Stress control techniques:

Counseling

- Examination of life goals
- Identification of stressors
- Recognition of personality traits and ego ideals
- Determine which of above can or should be accepted, which can be modified, and how such changes can be achieved

Relaxation training

- Meditation
- Guided imagery
- Hypnosis

Biofeedback

- Muscle tension control
- Temperature control
- Support group

Exercise

Medication

Stress control prescription:

What are the chief causes of stress in your life? \_\_\_\_\_

How do these causes of stress make you feel? \_\_\_\_\_

Strategies to reduce or eliminate these stresses? \_\_\_\_\_

Date: \_\_\_\_\_ Next visit to review progress: \_\_\_\_\_

Signed \_\_\_\_\_ (Patient) \_\_\_\_\_ (Physician)

serves to communicate to your patient the important message that prescriptions and therapy go beyond medications.

Individualize, personalize, and demythologize are the key words.<sup>19</sup> Efforts should consider family values, traditions, and beliefs and, when appropriate, should include the patient's family, peers, and community at large to help create an environment conducive to better health habits. For example, stopping smoking can be quite difficult if one's spouse, neighbor, or colleague smokes. Diet modification of any type is hampered if the person responsible for the shopping and cooking is not a participant or if economic restraints and transportation concerns are not considered during dietary counseling.

### The Follow-up

Health promotion should not stop after the patient leaves the office. When appropriate, the physician should telephone or visit the patient's home to reinforce the message and answer questions. Even if there are no questions, the message is two-fold: that you truly care about your patient and that you are concerned about the problem.

Specific health promotion strategies are indicated in several areas. Lifestyle-related problems are often a source of frustration to the family physician. However, it would not be surprising to learn that offspring and sibling predispositions now associated with many of the lifestyle-related disorders, such as cardiovascular diseases and various cancers, are actually re-

lated more to the lifestyles transmitted by the parents through role modeling than through genes.

### Implementing Health Promotion Strategies

Just as a medical student is uncomfortable and apprehensive when dealing with that first difficult medical problem, the same feelings are to be expected when first implementing health promotion strategies. One must remember that health promotion efforts, like other therapeutic methods, must be individualized by considering absorption and elimination (factors that enhance or interfere), agent (strategies that have the best efficacy for the given situation), dose (enough to be therapeutic, yet not toxic), and timing (frequency and relation to other "agents"). Further, each intervention should be considered a learning experience for both physician and patient, rather than a source of frustration. Realistic expectations are a must. Achieving weight loss in 20% of obese patients counseled can be disappointing to a physician who is used to a 100% success rate for treating urinary tract infections. Even in this situation, however, resistance to one antibiotic does not discourage physicians from selecting an alternate course. So it should be with health promotion.

Physicians must try to recognize and deal with health promotion blockers. These may include himself, his staff, the patient, third party administrators, and other sectors of the community. A physician who smokes or is known to consume alcoholic beverages before driving cannot truly believe it has no bearing on the way he approaches these problems in his patients. Even if the bulge in his shirt pocket, odor of his breath, or yellowed fingertips go unnoticed by some patients, a physician's personal habits are often a topic of conversation in the community. Similarly, the physician who defines a problem drinker as the patient who drinks more than he does must reexamine his own alcohol use.

The well-meaning staff can unknowingly sabotage health promotion efforts with such statements as "Well, you know the doctor is a fanatic about exercise," "I can't lose weight either," or other seemingly innocuous statements meant to be reassuring. In effect these statements give patients permission to ignore the physician's advice and fail in their efforts. Patients generally block health promotion efforts through denial, evasive answers, or attempts to postpone dealing with the problem. Specific rehearsed responses to patient rationalizations have proved helpful in focusing on the target behavior (Table 11.1).

Although they are likely to profit from health promotion activities, third-party payers have been slow to reimburse for time spent encouraging patients to adopt healthier lifestyles. This is one major factor to explain why physicians and patients are not more involved. However, one third-party administrator has reminded physicians that reimbursement is easier when a link between the health promotion effort and some reimbursable diagnosis (for example, smoking cessation-bronchitis, alcohol use-gastritis, or stress management-tension headaches) is noted.

Community impediments to good health and health promotion efforts are much more insidious and difficult to overcome.

Table 11.1 Suggested responses to patients' rationalizations.

- I've tried everything and I just can't. . . .
  - What exactly have you tried?
  - Every attempt teaches us something even if it's only what doesn't work.
  - Most people go through many attempts before success.
- I just don't have time. . . .
  - Let's look at your schedule for a spot.
  - Sometimes we have to readjust our priorities.
- I only wear my seatbelt when I'm on the highway.
  - Actually most accidents occur near the home.
  - Using seatbelts at all times sets a very good example for your children.
- I just don't eat that much.
  - Often it's not how much, it's what one eats.
  - Let's list everything, including beverages.
  - There are a lot of hidden calories out there, keep a diary of everything that passes your lips.
- [It] helps me deal with my problems.
  - Problems are fact situations that need to be changed.
  - Let's look more closely at your fact situations.
  - How can we change your fact situations to help?
- Why should I. . . .
  - What would you expect to gain?
  - What would you expect to lose?
  - We're not doing this for me, we're doing this for you.
  - If not for you, consider what's in it for your loved ones.
- [It] can't be that bad.
  - How bad does it have to be?
  - What would it take to convince you that it is?
  - If you were me, how would you get me to comply?
- If my spouse would . . . , I would.
  - Great, can I make an appointment for you both next week?
  - What would it take to get her to . . . ?
- I enjoy [it].
  - What exactly about [it] do you enjoy?
  - Is there an alternative activity that might serve as a substitute?
  - Is your enjoyment worth the risk of pain, suffering, or death later?
  - Is the enjoyment worth so much money?
- I'll stop when I really want to.
  - When will that be?
  - What will it take to make you really want to?
  - What can I do to help you want to?
  - What is it about that you like enough to risk your life and the health of your love ones?
- I switched to low tar (cut down—pipe—snuff).
  - You mean low poison?
  - Were you under the impression that it was less deadly?
  - That's like saying that jumping out of a 20-story window is not as unhealthy as jumping out of a 30-story window.
  - You must be worried about your health.
  - When will you stop?

However, once they are identified, effective actions can counter these blockers whose bottom line motivation is, of course, money. This is most easily illustrated by attempts promoting smoking prevention and reduction of alcohol use by young people. Such attempts are made all the more difficult because of community activities, such as auto races, rock concerts, athletic events, even community charity fundraisers that are sponsored by alcohol and cigarette companies. These events are intended to create social acceptance and complacency among nonusers and “innocence by association” as much as consumption among users. The enormous economic power of these companies through sponsorship, taxes, and advertising revenues can make prevention efforts unpopular.

If successful, health promotion efforts will put a number of people out of business in a lot of industries: tobacco, alcohol, snack food, automobile, pharmaceutical, hospital, nursing home, physicians, and allied health, to name but a few. Physicians should be aware of, but not deterred by, those who either do not recognize the harm to the community that these events represent or consider economic gain more important than good health.

### Counter-imaging

Counterimaging is the process of reversing the images commonly associated with a lifestyle or product to promote an unbuying or nonusing behavior, in this case, to promote healthier lifestyles. Each technique must consider specific images. We all choose certain lifestyles and use products that we believe will enhance our lifestyle or because we consciously or subconsciously wish to project certain images about ourselves to others. From the clothes we wear to the food we eat to the car we drive, there are cues and rewards that, when identified will help the physician better understand which health promotion approach might work best for a given patient.

Cost can be a strong motivator if it is presented in the proper perspective. The high school freshman might respond positively to information that money saved by not buying tobacco or alcohol could be used to purchase a stereo at the end of the year or a car when he is a senior. The young executive might be persuaded to give up his two packs a day by being told that the same money placed in an annuity would be worth nearly a million dollars at retirement.

In developing strategies, the family physician must take care to create an alliance with the patient against an “adversary”—the unhealthy lifestyle or the company selling it. Frequently, physicians assume a parental or authority role, which often alienates patients who are tired of people “telling me what to do.” This is especially true for adolescents.

### Smoking

Perhaps the most important question to be asked of someone who smokes is “What brand do you buy?” Since cigarettes are marketed to appeal to or help create particular images, the brand used will give clues to the patient’s current or desired self-image. These images can then be used as part of the cessation (demarketing) strategy, in which it should be pointed out that the short-term and long-term results of smoking are

exactly opposite to those created for the brand through advertising. For example, the 15-year-old girl who smokes Virginia Slims to appear sexy and independent might listen to information about how smoking causes “zoo breath” and yellow teeth or how the Philip Morris Company is exploiting her by making her think she’s “come a long way” when actually it is mocking her independence by telling her what to do and getting her hooked on cigarettes. It is hardly likely that she will listen to statistics about possible death or disease 20 or 30 years into the future.

The Carlton (or other low tar brands) smoker is concerned about health issues. Would the same person buy bread or soup marketed as lowest in poison?<sup>20</sup> The Players (or other “value pack” brands and generics) smoker might respond to calculations of yearly and lifetime savings from cessation. Another way to point out the illogic of smoking is to ask the patient if he or she smokes a brand inconsistent with its intended image. For example, rather than asking the Marlboro smoking truck driver to quit, suggest that he switch to Virginia Slims. This often leads the smoker to smile and realize the absurdity of smoking.

### Alcohol

Where alcohol may be a factor in health, the physician often has to search for signs and symptoms. It helps to remember “Where there are problems and there is alcohol, alcohol may be the problem.”<sup>21</sup> Two thirds of the adults in the United States drink alcohol, and 10% of those have an alcohol problem. Another 26% have potential alcohol problems. It would, therefore, be prudent to more closely examine one’s practice if not identifying concerns with alcohol use in about one of three adult patients themselves or within their family.

Since denial is the major hurdle in dealing with alcohol use, a careful history with very precise questions and an intuitive interpretation of the response is often necessary to detect alcohol problems. Here again, the brand and type of alcohol, as well as the circumstances surrounding its use, provide insight into the patient’s personality and clues to what intervention might be most successful. When problems with alcohol are suspected, professional treatment programs, such as Alcohol Anonymous, can be helpful and are recommended. The simple screening CAGE questions and the more comprehensive Michigan Alcoholism Screening Test (MAST) are useful for directing intervention and educational efforts as well as for identifying problem areas.<sup>18,22</sup>

### Exercise

Probably more than any other single health habit, exercise has the most visible rewards: improved appearance, stamina, self-esteem, and positive outlook. The exercise prescription should be highly individualized and must consider not only the patient’s medical history and physical status but also type, frequency, duration, and scheduling.<sup>23,24</sup> Like other lifestyle changes, exercise must be integrated rather than fitted into or added onto the patient’s daily activities. The important precept is to tap the patient’s highest level of activity.

Excessive cold, heat, and humidity are frequently encountered barriers to outdoor exercise. Economic considerations

may be an obstacle to the use of indoor facilities. In many cases, the exercise prescription could be focused on walks in a local shopping mall, as has become popular with older persons in retirement communities.<sup>25</sup>

### Obesity

Promoting appropriate dietary habits goes beyond advice, such as "You need more fiber," ". . . less fat," ". . . less sweets," or ". . . to go on a diet." Not only is a comprehensive dietary history necessary, but also it should be expanded to include when and where meals are eaten, who buys the food, who does the cooking, how does the patient view his need for a dietary change, what changes does he think are necessary, his feelings associated with foods or eating, and what impediments he can identify.

Diet is a part of culture as well as lifestyle and, more often than not, has evolved over time to fit into specific needs at the convenience of the patient. To attempt changes without evaluating the overall implications minimizes chances for successful intervention.

Reminding parents to advise children to resist commercial appeal and limit their intake of foods high in saturated fats, sodium, or sweets is an important step, as is pointing out the limited nutritional value of many fast food emporiums. Above all, diet pills are contraindicated. An important role of the family physician is to emphasize that phenylpropanolamine-containing drug preparations and other so-called diet pills not only are potentially harmful but also send the wrong message to the patient about dieting.<sup>26</sup> Proper weight management does not come from a pill but rather from a concerted, organized effort to eat sensibly and exercise moderately.

### Stress

The spectrum of stress-related problems ranges from acceptable → copeable → changeable → avoidable. Basically, a problem is a fact situation that needs to be changed because of the economic, physical, or mental impact on a person, his family, or his friends.<sup>27</sup> In addition to identifying the problem, the physician must uncover all the contributing factors in order to maximize intervention opportunities and develop successful strategies. A key to success lies in the ability to recognize which category a problem falls into, allowing for discussion and employment of adaptive behaviors.

### Geriatrics

Wellness has a special meaning for the nation's elderly. More than 80% of people over 65 have at least one chronic condition that affects functioning.<sup>28</sup> Although many older people can no longer be healthy in the sense of freedom from disease or disability, they can be well in that they can adopt health promoting behaviors. Indeed, those over 65 are more interested in health information than are younger groups.<sup>29</sup> This is not to say that the elderly should be exposed to such large quantities of health information in the lay press. Older people, because they are more frequently involved with episodes of illness or disability, are the target of numerous panacea pushers who often disguise their sales pitch in the form of articles in otherwise reputable magazines. Unfortunately, this can also be said

in many cases for health care services marketed in the form of health fairs.

Therefore, as part of a history, family physicians should inquire about health practices, home remedies, and nutritional supplementation. Drug therapy issues and accident prevention should be additional areas of increased concentration. Keep in mind that many elderly patients are too proud or embarrassed to ask questions or to request help (Table 11.2).

## The Community

Unfortunately, the individuals in whom health promotion can have the greatest impact are most often the ones who do not present to the physician until damage has already been done. Fortunately, family physicians are in a position to have a profound impact on public health. Every family physician is a potential community health promotion specialist and should take advantage of opportunities to participate or take the lead in the "in-the-streets" health promotion on a community level. Just as one must question and understand the patient to facilitate change in behaviors, one must study and understand community-wide risk factors to be effective in prevention and intervention activities. The physician must have a sense of the true proportion of the major causes of morbidity and mortality within his community. A good way to begin is to get on the mailing list for health department announcements and meet with the medical examiner or coroner.

One need not count each family member, friend, or patient who contributes to the statistics to know that tobacco and

Table 11.2 Considerations when treating the elderly patient.

#### Drug therapy

- Wallet cards for medication lists
- Compliance-enhancing medication dispensers
- Written directions for medications
- Medication charts placed in highly visible areas (e.g., on a refrigerator door)

#### Nutrition

- Provide a list of referral sources
- Mechanical limitations (e.g., dentures)
- Economic restraints
- Transportation difficulties

#### Accident prevention

- Accident proofing the home, especially against falls
- Wallet cards for medical information and next of kin

#### Exercise

- Specific programs for the elderly
- Stress flexibility and duration, not strength
- Keep progress charts to reinforce gain
- Encourage walks in the shopping mall

#### General

- Use large print for handouts (larger than 8 point type)
- Audiotapes for visually impaired
- Waiting room furniture that is easy to get into and out of
- Encourage making a list of questions before the office visit
- Encourage social activities to prevent loneliness and depression
- Recruit for community health promotion efforts

alcohol alone account for about a third of disease and deaths and thus deserve special emphasis.<sup>30</sup> Consider the outcry by chain-smoking workers over the possible chemical toxins at the worksite, puffing parents over asbestos in the classroom ceilings, or radio-station sponsored beer busts to raise money for Easter Seals before rationalizing "but everybody knows about those." The apparent enormity of the challenge of these and other areas of needed emphasis (teen alcohol and accidents, children having children, illicit drug use, stress due to unemployment, to name but a few) need not seem so overwhelming. By way of local media, the service club lecture circuit, volunteer agencies, and even solicitation among patients, other people, groups, corporations, and bureaucrats can be mobilized and motivated to take up the call to ensure better health for citizens. For example, a simple change in the temperature setting on hot water heaters from 165°F to 125°F could literally abolish scalds while not affecting the tasks for which hot water is needed. Rather than seeking legislation, the family physician could meet with appliance sales and repair personnel to effect immediate local change and let them take up the cause (and benefit from the positive publicity) by petitioning the state health department for a statewide regulation.

### Youth

One of the most rewarding experiences for even the busiest family physician is with young people through local school systems. Nearly all of the unhealthy behavior patterns that account for so much death and disability are initiated during these formative years. A physician advocate is a valuable resource not only for the students but also for the teachers, administrators, and parents. Working with schools can involve a number of areas, such as policy making, education, evaluation, and maintenance. Advising the Board of Education, principals, and teachers on matters concerning health is one of the more vital opportunities for generating a quick and dramatic impact.

Health programs and policies often are established by the state. However, the method of implementation is often left to the local superintendent and Board of Education, and family physicians can assist with interpretation. For example, elimination of the smoking area on campus not only removes the impression that smoking is sanctioned but, more often than not, also decreases the drug problem as well, since detection of smoking anywhere of any type on campus can result in disciplinary action. In fact, in 1986, a physician in California succeeded in passage of a bill to ban smoking in all secondary schools.

Customarily, classroom presentations by physicians have been knowledge-based lectures discussing normal anatomy and the physiology of disease processes. Although this may increase the level of knowledge among the students, it is unlikely to have a major impact on unhealthy behaviors. By including image-based messages that make fun of adverse lifestyles, thereby laughing the drug pushers out of town, emphasizing decision-making skills (for example, role-playing with group discussion) and teaching how to say "No" without embarrassment or forfeiting of peer group status, changes in behavior are more likely to occur.

Involvement with the students should go beyond classroom presentations to include activities that actually start the students thinking and involve them on a continuing basis. Although many school systems have organized antidrug rallies, it is essential to recognize that tobacco and alcohol are the two neglected cornerstones of drug abuse. One of the first youth-run, family physician-organized conferences aimed at developing spoofs of tobacco and alcohol as part of a health promotion activity of a countywide school system was held in Miami, Florida. Then called Superhealth '79, it has since been changed to Superhealth 2000 to allow more time for success.<sup>31</sup>

Contests and class projects can be variable as the subject matter they might address. Some successful health promotion ideas have included poster contests, writing scripts for local radio and television commercials, essays, athletic events, and other activities having the students as organizers and participants.

Education efforts should involve teachers as well as students. Reluctance by some teachers to cover such topics as tobacco, alcohol, illegal drugs, sexually transmitted diseases, or contraception is often a result of inadequate training. "The kids know more than I do" is an often heard comment. Family physicians can serve the school system as a valuable resource while stimulating a greater understanding and enthusiasm for the subject matter among students and teachers.

Incorporating health information into the traditional subjects of mathematics, English, current events, or social studies should be encouraged. For example, a math problem might be related to counting calories in fast foods or calculating how much smoking shortens one's life. An English essay could discuss health quackery. Subtle health promotion opportunities in the classroom are limitless.

### Adults

Besides teaching continuing education courses, family physicians can also impact on the health habits of adults in the community. With the ever-increasing emphasis on a more cost-effective approach to health care, family physicians with a broad scope of training and clinical practice make an excellent and logical resource for community leaders. The key question among people might be how to improve the quality and length of life. Corporate decision makers, however, are also concerned with maximizing health care dollars. Executives are being forced to incorporate worksite health promotion activities because of excessive absenteeism, decreased productivity, increased disability, and increased health care costs.<sup>32</sup> Meaningful changes in health behaviors can be achieved at the worksite from health promotion activities.<sup>33</sup> The question of cost effectiveness can be answered affirmatively if long-term parameters are considered. However, no matter how cost-effective a program might be, the most important factor in such a program is improved health among employees.

### Media

There are two basic mechanisms for getting information to the public: the print media and the electronic media. With compassion, time, and effort, family physicians can effectively use both with remarkable results. The key to success is forming a

strong relationship with community media representatives. One can begin with a personal visit to the office of a media representative for the purpose of becoming acquainted and discussing your desire to serve as a resource for health promotion matters.

### *Print Media*

The print media afford the family physician several unique and far-reaching opportunities to impact on community and patients. Increased public desire for health-related information and the numerous and varied opportunities available in nearly every community regardless of size have resulted in making print media one of the most popular health promotion tools used by physicians. The gap between what physicians know to be true and what the public thinks is true may actually be widening because of disinformation campaigns by manufacturers of over-the-counter drugs and food supplements, and by alternative care providers. There are at least four avenues for media print involvement: news articles, cartoons, letters to the editor, and personal comments included in national stories.

Although many physicians have incorporated newsletters into their practices as a method of reaching their patients, use of the local newspapers is a more effective method of reaching a far greater audience with similar information. Syndicated columns and articles on health-related topics by physicians are carried in nearly every newspaper. Local physicians interested in performing this type of public service will find little difficulty in getting well-written articles published locally as opinion editorial pieces or in a periodic column. Original articles can be written or summarized from other sources. They must be succinct, timely, and written at a level of understanding for the public. Formats are easily obtained from the local editor. Cartoons can be similar to those found on editorial or comic pages.

Letters to the editor from physicians are nearly always published and are well read. Stimulation for such a letter can be found with little difficulty in nearly every edition of the paper—for example, “13 Year Old Overdoses,” “Smoldering Cigarette—\$180,000 Damage.” Letters should clearly define the issue, clarify or state factual material to support the writer’s position, and close, if pertinent, with a succinct call to action. Some smaller papers will honor a request to publish the letter in editions that have the highest circulation, usually the Sunday edition.

When possible, reporters like to add local flavor to national stories. By getting to know the medical writer, one is much more likely to be contacted for comment about nationally released wire stories on newsworthy medical topics.

Not to be overlooked are bus benches, T-shirts, bumper stickers, notebook stickers, and buttons that can be distributed around the community with a health message—and your practice logo. Bus benches are a very inexpensive, highly visible medium for prohealth messages. T-shirts can be given away to newborns, during classroom discussions for the best questions, or as uniforms for the youth leagues sports teams. At a fraction of a cent each, stickers for children’s notebooks leave lasting impressions.

### *Electronic Media*

The use of radio and television in many ways parallels that of the print media. Many of the mechanisms and considerations are the same. In addition to forming a strong relationship with the most capable and responsible medical reporter, the physician must be willing either to participate on a somewhat regular basis in scheduled programming or be available to comment on nationally released stories on short notice.

Recognizing that there are many physicians who want to become involved yet have had no training in the use of media, the American Academy of Family Physicians (AAFP), offers an “Issues for Better Health” media training workshop. Working with local drama clubs or theatrical groups, the family physician can stimulate or develop locally produced public service announcements about health.

### **Legislative Activities**

Because of time restraints in practice, many physicians are reluctant to become involved in politics. However, legislative reforms continue to be a major stimulus for health policy changes. In recent years, legislation regarding health matters has been enacted from the community to the national level because of input from physicians. These activities represent a potential that could achieve results equivalent to all other services rendered in one’s career. Family physicians should not underestimate their influence as consultants in legislative matters nor overestimate the amount of time necessary to be involved.

On a local and state level, it is most productive to concentrate on a few areas, such as a ban on tobacco sampling and drug paraphernalia stores, enforcement of minor laws regarding purchase of alcohol and tobacco, clean indoor air regulations, strict sentencing for alcohol- and drug-related offenses, or child and adult safety restraints laws. One physician’s testimony at legislative hearings promoting the good health of the members of the community (which in reality might lower his income) far outweighs testimony of those who stand to profit from passage of an undesirable bill. For example, a physician in an intentional twist at a motorcycle helmet law hearing, pleaded in favor of repeal citing the extreme shortage of donor organs since the bill had been enacted a few years earlier. To start to become involved physicians should consider taking at least a full day off from practice and travel to the state capital for meetings with legislators.

### **Health Promotion—Synonymous with Family Practice**

This chapter outlines a philosophy and some of the strategies implicit in the concept of health promotion. To become health promotion specialists, family physicians should keep three objectives in mind: (1) to decrease death and disease from lifestyle-related diseases, (2) to educate the public, especially young people, about the causes of ill health, and (3) to motivate and train others in the art of health promotion.

Just as with taking a history or examining a patient, study, observation, and practice are necessary to hone health promo-

tion skills to the point where they are integrated into—not added onto—a family physician's practice. Health promotion must become as natural as any other part of the patient encounter.

It may well be that future increments in life span, decrease in morbidity, and our ability to truly serve our patients will depend on how well we accomplish the preventive efforts we have outlined. Family physicians as health promotion specialists—if not us, who?

*Acknowledgements.* We would like to thank Thomas P. Houston, M.D., Paul Fischer, M.D., and Nancy A. Neef, M.P.H., for their contributions to this chapter.

## References

1. The Surgeon General's Report On Health Promotion/Disease Prevention. Washington, DC: DHEW, 1979.
2. Use, Habits Among Adults with Cigarettes, Coffee, Aspirin, and Sleeping Pills. Washington, DC: DHEW, 1976.
3. Wechsler H. The physician's role in health promotion—survey of primary care practitioners. *N Engl J Med* 1983;308:99–101.
4. Shank CJ. DOC as an integral part of the community medicine curriculum. *Fam Med* 1985;17(3):96–8.
5. Blum A. The family physician and health promotion: do gooding or really doing well? *Can Fam Physician* 1982;28:1613–20.
6. Highlights from Wave One of the National Survey of Personal Health Practices and Consequences. United States, 1979. Washington, DC: DHHS, 1981.
7. Richards JW Jr. A positive health strategy for the office waiting room. *NY State J Med* 1983;83(13):1358–60.
8. Richards JW Jr. Education about tobacco abuse in the waiting room. *GAFF J* 1985;6(4):5–6.
9. Houston TP. Priorities in health promotion. *Postgrad Med* 1984;76(5):223–30.
10. Fischer P. Inappropriate magazines for the waiting room. *NY State J Med* Dec 1985;85(7):465–6.
11. Saver S. Miami physicians take lead in drive to eliminate cigaret smoking. *AMA News* Feb. 17, 1978:1–3.
12. Blum A. Medical activism. In: Taylor RB, Ureda JR, Denham JW, eds. *Health promotion: principles and clinical applications*. E. Norwalk, CT: Appleton-Century Crofts, 1982.
13. Sloan P. A prevention oriented medical record. *J Fam Pract* 1979;9(1):89–92.
14. Brunton SA. Physicians as patient teachers. *J West Med* 1984;141(6):857–9.
15. With pressure from medical group, Washington drug chain bans tobacco. *US Tobacco Candy J* 1986;213(30):3.
16. Lewis CE. Teaching medical students about disease prevention and health promotion. *Public Health Rep* 1982;97(3):213–9.
17. Taylor RB. *Health promotion in clinical practice* (seminar monograph) Portland, OR: Oregon Health Sciences University, 1985.
18. Ewing JA. **Recognizing, confronting and helping the alcoholic.** *Am Fam Physician* 1978;16:107–14.
19. Blum A. Butting in where it counts. *Hosp Physicians* 1980;16(4):22–35.
20. Blum A. Would you buy bread lowest in carcinogens? *Advertising Age* Oct. 29, 1979:86.
21. Willingway Hospital Advertisement, Willingway Hospital, 311 Jones Mill Road, Statesboro, GA 30458.
22. Selzer ML, Vinoker A, Van Rooijen L. Self-administered short Michigan Alcoholism Screening Test (SMAST). *J Stud Alcohol* 1975;36:117–27.
23. Payne FE Jr. Exercises that help bodies stay healthy. Consultant August 1983, pp 188–92.
24. Payne FE Jr. A private approach to effective exercise. *Am Fam Physician* 1976;19(6):76.
25. Barry HC. Exercise prescriptions for the elderly. *Am Fam Physician* 1986;34(3):155–162.
26. Blum A. Phenylpropanolamine. An over-the-counter amphetamine? *JAMA* 1981;245(13):1346–47.
27. Plymat WN. Personal Communication
28. Abbott SD. Wellness programs for older adults. *Perspect Aging* 1986;12(2):7–8.
29. Dychtwald K. *Wellness and health promotion for the elderly*. Rockville, MD: Aspen Publishers, 1986.
30. Houston T. A private statistic in what should be a public war. *Postgrad Med* 1986;79(7):13–6.
31. Nerchant B. No butts about it—teen hates smoking. *Miami Herald* Dec. 10, 1978:5c.
32. Wright CC. Cost containment through health promotion programs. *J Occup Med* 1982;24(12):965.
33. Blair SN. A public health intervention model for work site health promotion. *JAMA* 1986;255(7):921–3.